

## ABSTRACT OF THE DISCLOSURE

The electro-chemical machining apparatus of this invention is designed to smoothing a metal film by efficiently reducing initial rough surface and removing excessive metal film with reduced damages to the metal film. For this end, the electro-chemical machining apparatus performs electro-chemical machining of an object to be machined having a metal film on the surface to be machined. Such apparatus has a means for holding the object to be machined, a wiper for wiping the surface of the object to be machined, a means for supplying electrolytic solution onto the surface of the object to be machined, a first electrode disposed at a position opposed to the surface of the object to be machined, a second electrode disposed at a peripheral portion on the surface of the object to be machined, and a power supply for causing electrical current to flow between the second electrode on the surface of the object to be machined and the first electrode.